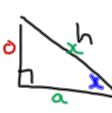


 $V = Ah$
 $V = \pi r^2 h$
 $V = (5.14)(10.4) = 53.4$
 $V = 3.14(r^2)(10.4)$
 $= 32.413 \text{ cm}^3$
 b) Optimize Can
 maximize material for
 same volume
 can's diameter = height
 $V = 2\pi r^2 h$
 $904.3 = 2\pi r^2 h$
 $904.3 = 2\pi r^2 (2r)$
 $904.3 = 4\pi r^3$
 $\sqrt[3]{\frac{904.3}{4\pi}} = r$
 $r = 5.2$
 $\% \text{ shed} = \frac{SA_{\text{out}}}{SA_{\text{cyl}}} \times 100$
 $= \frac{6\pi r^2}{2\pi r^2 + 4\pi rh} \times 100$
 $= \frac{6\pi (5.2)^2}{2\pi (5.2)^2 + 4\pi (5.2)(10.4)} \times 100$
 $= 62.2\%$

Feb 15-9:44 AM

Map 4C
 Trig Ratios with Acute
 Triangles
 2.1 p. 74-83

Primary Trig Ratios SOH CAH TOA

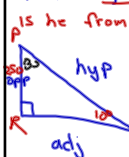


 $\sin \angle x = \frac{o}{h}$
 $\cos \angle x = \frac{a}{h}$
 $\tan \angle x = \frac{o}{a}$

Pythagorean
 Theorem
 $a^2 + b^2 = h^2$

Feb 2-12:30 PM

Trigonometry to find lengths
 Jason observes a plane 250 m in the air
 at an angle of inclination of 10° . How far
 is he from the plane? (ground distance)
 SOH CAH TOA $a^2 + b^2 = h^2$




 $\tan 10^\circ = \frac{o}{a}$
 $\tan 10^\circ = \frac{250}{a}$
 $a = \frac{250}{\tan 10^\circ}$
 $a = \frac{250}{0.1763}$
 $a = 1418.0$

Jason is 1418 m from the
 plane on the ground.

Feb 2-12:40 PM

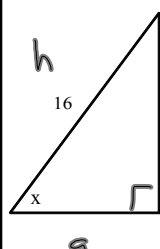
p. 6 Example SOH CAH TOA



 $\cos 60^\circ = \frac{a}{h}$
 $\cos 60^\circ = \frac{2.5\text{m}}{h}$
 $h = \frac{2.5\text{m}}{\cos 60^\circ}$
 $h = \frac{2.5\text{m}}{0.5000}$
 $h = 5.0\text{m}$

Feb 2-12:59 PM

Solve for an Angle



 $\sin x = \frac{o}{h}$
 $\sin x = \frac{9}{16}$
 $\sin x = 0.5625$
 $x = \sin^{-1}(0.5625)$
 $x = 34^\circ$

Feb 14-3:01 PM

Hmk p. 81-83
 q. 6, 7, 9-12, 13*

Feb 14-2:53 PM